ANEXO B

TABULACIÓN DE VALORES DE SIMULACIÓN PARA RNN

Tabla B.1. First group - RNN results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	8041.010	6184.416	0.03766	4.294
4	1	1	4,1,1	7745.429	5885.487	0.03556	4.243
8	1	1	8,1,1	7698.151	5879.583	0.03587	4.413
16	1	1	16,1,1	7498.964	5757.861	0.03570	4.816
32	1	1	32,1,1	8502.158	6697.261	0.04575	5.555
1	10	1	1,10,1	6523.799	4838.783	0.02687	4.377
4	10	1	4,10,1	6245.870	4561.643	0.02516	4.251
8	10	1	8,10,1	6354.512	4697.402	0.02608	4.455
16	10	1	16,10,1	6421.354	4781.975	0.02701	4.899
32	10	1	32,10,1	6582.429	4972.353	0.02892	5.613
1	50	1	1,50,1	6021.628	4441.591	0.02390	4.095
4	50	1	4,50,1	6283.493	4688.289	0.02623	4.402
8	50	1	8,50,1	6111.695	4547.374	0.02524	4.406
16	50	1	16,50,1	6586.458	5194.036	0.03156	4.840
32	50	1	32,50,1	7269.405	5916.334	0.03710	5.588
1	1	10	1,1,10	6092.491	4490.291	0.02506	5.778
4	1	10	4,1,10	6000.176	4367.495	0.02343	7.369
8	1	10	8,1,10	5998.643	4386.663	0.02386	10.179
16	1	10	16,1,10	6051.919	4443.976	0.02454	13.049
32	1	10	32,1,10	6142.847	4526.946	0.02553	17.963
1	10	10	1,10,10	5835.602	4241.175	0.02260	5.793
4	10	10	4,10,10	**5711.161**	**4054.292**	**0.02137**	**7.177**
8	10	10	8,10,10	5686.112	4152.902	0.02245	8.916
16	10	10	16,10,10	5930.762	4382.871	0.02412	12.436
32	10	10	32,10,10	6197.371	4600.675	0.02617	18.303
1	50	10	1,50,10	6086.476	4516.026	0.02532	6.472
4	50	10	4,50,10	5911.804	4246.990	0.02273	7.930
8	50	10	8,50,10	5955.428	4412.038	0.02449	9.737
16	50	10	16,50,10	6069.447	4614.068	0.02698	13.011
32	50	10	32,50,10	6583.370	5094.305	0.02989	18.922
1	1	100	1,1,100	6002.425	4432.743	0.02472	24.350
4	1	100	4,1,100	5847.244	4245.517	0.02287	36.942
8	1	100	8,1,100	5803.888	4220.450	0.02292	53.517
16	1	100	16,1,100	5792.359	4184.402	0.02232	85.802
32	1	100	32,1,100	6061.722	4414.835	0.02414	145.852
1	10	100	1,10,100	5771.389	4203.303	0.02283	24.362
4	10	100	4,10,100	5902.660	4208.705	0.02266	37.626
8	10	100	8,10,100	5900.848	4314.305	0.02350	55.971
16	10	100	16,10,100	6089.943	4505.597	0.02484	89.621
32	10	100	32,10,100	6423.240	4710.539	0.02543	158.550
1	50	100	1,50,100	5777.194	4255.769	0.02339	25.056
4	50	100	4,50,100	5969.873	4340.069	0.02428	39.825
8	50	100	8,50,100	6346.355	4729.042	0.02667	55.836
16	50	100	16,50,100	6344.973	4818.684	0.02761	89.855
32	50	100	32,50,100	6333.144	4787.140	0.02726	153.253

Tabla B.2. Second group - RNN results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	8264.423	6198.696	0.03628	4.444
4	1	1	4,1,1	7466.769	5548.018	0.03223	4.488
8	1	1	8,1,1	7817.215	5897.032	0.03493	5.066
16	1	1	16,1,1	8330.440	6344.814	0.04002	5.806
32	1	1	32,1,1	7735.334	5943.193	0.03821	7.533
1	10	1	1,10,1	6397.451	4687.231	0.02511	4.543
4	10	1	4,10,1	6315.344	4637.096	0.02564	4.561
8	10	1	8,10,1	6305.934	4672.947	0.02599	5.101
16	10	1	16,10,1	6445.454	4842.255	0.02741	5.780
32	10	1	32,10,1	6438.671	4888.691	0.02858	7.291
1	50	1	1,50,1	7310.982	5823.423	0.03626	4.300
4	50	1	4,50,1	6819.065	5294.410	0.03207	4.566
8	50	1	8,50,1	7044.288	5546.835	0.03449	4.934
16	50	1	16,50,1	7748.800	6430.560	0.04272	5.751
32	50	1	32,50,1	7480.378	6125.640	0.03914	7.167
1	1	10	1,1,10	6126.284	4524.729	0.02560	7.650
4	1	10	4,1,10	5981.849	4349.155	0.02331	10.520
8	1	10	8,1,10	5973.884	4371.984	0.02382	13.910
16	1	10	16,1,10	5975.165	4371.917	0.02398	21.010
32	1	10	32,1,10	6102.142	4486.834	0.02504	33.442
1	10	10	1,10,10	6144.888	4450.322	0.02431	8.193
4	10	10	4,10,10	5970.575	4177.205	0.02179	11.366
8	10	10	8,10,10	5866.308	4212.578	0.02237	14.408
16	10	10	16,10,10	6211.495	4650.978	0.02623	21.456
32	10	10	32,10,10	6359.569	4882.864	0.02941	35.186
1	50	10	1,50,10	6272.191	4632.629	0.02563	7.876
4	50	10	4,50,10	5980.826	4243.003	0.02244	10.940
8	50	10	8,50,10	6048.965	4375.544	0.02398	14.886
16	50	10	16,50,10	7049.940	5532.115	0.03337	21.298
32	50	10	32,50,10	6899.477	5497.488	0.03322	35.358
1	1	100	1,1,100	6061.380	4498.280	0.02566	43.547
4	1	100	4,1,100	5818.858	4195.087	0.02193	71.291
8	1	100	8,1,100	5797.595	4195.585	0.02223	104.282
16	1	100	16,1,100	**5728.889**	**4126.839**	**0.02184**	**172.208**
32	1	100	32,1,100	6135.245	4500.233	0.02490	295.226
1	10	100	1,10,100	6116.857	4523.705	0.02571	43.426
4	10	100	4,10,100	6040.680	4155.594	0.02132	70.466
8	10	100	8,10,100	5953.377	4153.981	0.02154	105.968
16	10	100	16,10,100	5992.731	4422.035	0.02428	178.091
32	10	100	32,10,100	6270.852	4643.521	0.02637	307.073
1	50	100	1,50,100	6129.236	4581.464	0.02645	44.117
4	50	100	4,50,100	5938.367	4207.977	0.02211	72.367
8	50	100	8,50,100	6537.277	4763.506	0.02620	106.444
16	50	100	16,50,100	6196.209	4692.807	0.02710	179.049
32	50	100	32,50,100	6644.541	5165.368	0.03050	312.755

Tabla B.3. Third group - RNN results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	7194.319	5331.976	0.03055	4.668
4	1	1	4,1,1	6963.530	5128.606	0.02875	4.873
8	1	1	8,1,1	7026.252	5221.889	0.02969	5.475
16	1	1	16,1,1	7214.087	5433.772	0.03194	6.811
32	1	1	32,1,1	7253.621	5567.343	0.03588	8.976
1	10	1	1,10,1	6308.709	4605.106	0.02508	4.725
4	10	1	4,10,1	6088.770	4402.207	0.02397	5.048
8	10	1	8,10,1	6169.332	4523.705	0.02481	5.452
16	10	1	16,10,1	6381.347	4804.183	0.02733	6.855
32	10	1	32,10,1	6401.480	4881.550	0.02824	9.162
1	50	1	1,50,1	7885.471	6371.299	0.04007	4.471
4	50	1	4,50,1	6206.752	4596.026	0.02591	5.057
8	50	1	8,50,1	6556.461	4970.793	0.02923	5.494
16	50	1	16,50,1	7564.609	6176.705	0.04009	6.593
32	50	1	32,50,1	7481.168	6140.377	0.03910	8.709
1	1	10	1,1,10	6100.248	4505.734	0.02556	9.576
4	1	10	4,1,10	5918.521	4288.998	0.02277	13.833
8	1	10	8,1,10	5886.132	4275.692	0.02293	18.791
16	1	10	16,1,10	5916.945	4310.722	0.02341	29.035
32	1	10	32,1,10	6089.722	4485.436	0.02503	48.671
1	10	10	1,10,10	6110.475	4405.764	0.02390	9.709
4	10	10	4,10,10	5971.927	4138.098	0.02134	13.888
8	10	10	8,10,10	5810.695	4137.337	0.02183	19.777
16	10	10	16,10,10	6088.359	4531.125	0.02542	31.360
32	10	10	32,10,10	6392.863	4930.141	0.03027	51.752
1	50	10	1,50,10	6131.799	4504.953	0.02482	9.734
4	50	10	4,50,10	6062.011	4340.094	0.02322	15.465
8	50	10	8,50,10	5991.916	4345.938	0.02394	22.341
16	50	10	16,50,10	6569.367	5059.891	0.02976	31.518
32	50	10	32,50,10	7055.334	5672.917	0.03461	51.265
1	1	100	1,1,100	6032.104	4477.264	0.02544	63.459
4	1	100	4,1,100	5813.156	4185.606	0.02179	103.505
8	1	100	8,1,100	5731.945	4122.351	0.02151	152.779
16	1	100	16,1,100	**5679.286**	**4070.981**	**0.02126**	**257.146**
32	1	100	32,1,100	6021.056	4398.973	0.02413	452.392
1	10	100	1,10,100	6131.135	4530.797	0.02569	64.706
4	10	100	4,10,100	6030.218	4150.092	0.02120	107.461
8	10	100	8,10,100	5846.307	4100.779	0.02130	159.554
16	10	100	16,10,100	5837.383	4290.233	0.02371	269.197
32	10	100	32,10,100	6163.707	4538.004	0.02554	473.384
1	50	100	1,50,100	6161.513	4616.692	0.02664	62.573
4	50	100	4,50,100	5899.451	4122.769	0.02136	104.873
8	50	100	8,50,100	6273.308	4588.548	0.02508	157.796
16	50	100	16,50,100	6037.334	4536.079	0.02564	277.025
32	50	100	32,50,100	6775.861	5332.925	0.03192	472.039

ANEXO C

TABULACIÓN DE VALORES DE SIMULACIÓN PARA LSTM

Tabla C.1. First group - LSTM results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	6278.625	4616.917	0.02600	4.852
4	1	1	4,1,1	6246.828	4582.252	0.02600	4.935
8	1	1	8,1,1	6457.482	4780.564	0.02800	4.832
16	1	1	16,1,1	6393.788	4741.358	0.02800	4.816
32	1	1	32,1,1	6277.409	4640.037	0.02719	4.962
1	10	1	1,10,1	5915.114	4282.088	0.02301	4.907
4	10	1	4,10,1	5815.973	4202.451	0.02212	4.865
8	10	1	8,10,1	5809.749	4209.799	0.02226	4.883
16	10	1	16,10,1	5839.847	4223.117	0.02250	4.905
32	10	1	32,10,1	6021.453	4389.524	0.02390	4.884
1	50	1	1,50,1	5738.843	4118.099	0.02163	4.914
4	50	1	4,50,1	5798.812	4206.891	0.02219	4.970
8	50	1	8,50,1	5696.249	4101.376	0.02121	5.104
16	50	1	16,50,1	5756.111	4132.511	0.02157	4.948
32	50	1	32,50,1	6055.832	4477.512	0.02500	4.944
1	1	10	1,1,10	6030.275	4436.444	0.02458	7.478
4	1	10	4,1,10	5816.714	4187.694	0.02180	7.562
8	1	10	8,1,10	5768.011	4161.317	0.02180	7.429
16	1	10	16,1,10	5884.758	4267.433	0.02294	7.745
32	1	10	32,1,10	6059.172	4418.967	0.02431	8.007
1	10	10	1,10,10	5597.255	3957.924	0.02024	7.737
4	10	10	4,10,10	5690.536	4058.700	0.02081	7.769
8	10	10	8,10,10	5604.793	3991.098	0.02023	7.828
16	10	10	16,10,10	5701.377	4051.952	0.02074	7.878
32	10	10	32,10,10	5937.894	4302.242	0.02291	8.109
1	50	10	1,50,10	5720.684	4006.395	0.02048	7.571
4	50	10	4,50,10	5767.160	4167.126	0.02173	7.714
8	50	10	8,50,10	5792.853	4123.933	0.02082	7.727
16	50	10	16,50,10	5763.336	4125.696	0.02147	8.213
32	50	10	32,50,10	6008.060	4386.517	0.02384	8.988
1	1	100	1,1,100	5989.132	4447.379	0.02493	38.309
4	1	100	4,1,100	5622.655	3979.365	0.02022	35.318
8	1	100	8,1,100	**5573.399**	**3961.516**	**0.01959**	**35.745**
16	1	100	16,1,100	5601.727	3967.866	0.02032	36.849
32	1	100	32,1,100	5946.213	4228.376	0.02196	38.831
1	10	100	1,10,100	5673.150	3989.207	0.0202	36.235
4	10	100	4,10,100	5713.276	4160.416	0.0220	36.890
8	10	100	8,10,100	5927.279	4178.253	0.0212	37.349
16	10	100	16,10,100	5922.645	4207.654	0.0215	38.728
32	10	100	32,10,100	6101.376	4347.116	0.0222	40.124
1	50	100	1,50,100	6599.346	4767.674	0.0270	35.798
4	50	100	4,50,100	6249.300	4521.593	0.0237	36.638
8	50	100	8,50,100	6909.840	4820.470	0.0243	37.081
16	50	100	16,50,100	6576.371	4766.463	0.0242	38.136
32	50	100	32,50,100	6366.802	4555.314	0.0230	40.388

Tabla C.2. Second group - LSTM results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	6242.708	4580.582	0.0258	5.149
4	1	1	4,1,1	6124.999	4466.070	0.0246	5.116
8	1	1	8,1,1	6132.678	4491.354	0.0250	5.157
16	1	1	16,1,1	6088.017	4468.417	0.0252	5.232
32	1	1	32,1,1	6189.000	4594.940	0.0268	5.327
1	10	1	1,10,1	5908.768	4246.514	0.0224	5.073
4	10	1	4,10,1	5788.395	4169.099	0.0217	5.136
8	10	1	8,10,1	5738.395	4145.350	0.0216	5.195
16	10	1	16,10,1	5777.050	4161.851	0.0219	5.305
32	10	1	32,10,1	5995.695	4383.680	0.0238	5.377
1	50	1	1,50,1	5723.640	4072.236	0.0210	5.155
4	50	1	4,50,1	5827.845	4244.855	0.0223	5.211
8	50	1	8,50,1	5723.338	4143.657	0.0215	5.176
16	50	1	16,50,1	5776.457	4168.793	0.0219	5.440
32	50	1	32,50,1	5972.842	4353.326	0.0234	5.942
1	1	10	1,1,10	6140.694	4537.688	0.0258	11.417
4	1	10	4,1,10	5849.655	4220.092	0.0221	11.717
8	1	10	8,1,10	5757.818	4156.135	0.0218	10.545
16	1	10	16,1,10	5815.280	4200.822	0.0223	10.956
32	1	10	32,1,10	6030.587	4404.127	0.0241	11.575
1	10	10	1,10,10	5813.022	4128.869	0.0215	10.684
4	10	10	4,10,10	5758.686	4134.566	0.0213	10.916
8	10	10	8,10,10	5627.983	4025.243	0.0205	11.118
16	10	10	16,10,10	5767.064	4126.484	0.0215	11.515
32	10	10	32,10,10	5826.665	4313.961	0.0243	12.103
1	50	10	1,50,10	5995.720	4174.210	0.0217	10.763
4	50	10	4,50,10	5926.611	4189.583	0.0217	10.923
8	50	10	8,50,10	5734.521	4071.088	0.0207	11.165
16	50	10	16,50,10	5843.860	4242.921	0.0225	11.251
32	50	10	32,50,10	6037.831	4546.040	0.0263	11.966
1	1	100	1,1,100	6073.303	4521.338	0.0258	62.194
4	1	100	4,1,100	5666.535	4016.597	0.0203	64.102
8	1	100	8,1,100	**5581.399**	**3947.681**	**0.0199**	**66.765**
16	1	100	16,1,100	5590.626	3958.830	0.0201	69.435
32	1	100	32,1,100	5952.715	4293.704	0.0230	76.126
1	10	100	1,10,100	6016.432	4256.494	0.0219	66.919
4	10	100	4,10,100	6000.570	4092.247	0.0205	72.178
8	10	100	8,10,100	6070.580	4197.389	0.0208	70.396
16	10	100	16,10,100	5829.366	4184.102	0.0214	74.220
32	10	100	32,10,100	5705.844	4039.341	0.0207	79.664
1	50	100	1,50,100	6284.524	4439.835	0.0233	66.763
4	50	100	4,50,100	6357.275	4349.593	0.0217	68.606
8	50	100	8,50,100	7075.479	4854.955	0.0239	69.805
16	50	100	16,50,100	6460.692	4627.694	0.0237	73.318
32	50	100	32,50,100	6104.232	4377.700	0.0228	79.177

Tabla C.3. Third group - LSTM results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	6161.156	4508.858	0.0249	5.291
4	1	1	4,1,1	6109.359	4472.690	0.0247	5.417
8	1	1	8,1,1	6124.661	4499.495	0.0250	5.471
16	1	1	16,1,1	6040.620	4431.244	0.0247	5.635
32	1	1	32,1,1	6145.139	4562.047	0.0262	5.712
1	10	1	1,10,1	5945.197	4300.941	0.0231	5.366
4	10	1	4,10,1	5807.818	4198.970	0.0220	5.406
8	10	1	8,10,1	5730.962	4140.903	0.0216	5.472
16	10	1	16,10,1	5799.240	4189.905	0.0221	5.483
32	10	1	32,10,1	6085.750	4539.235	0.0258	5.648
1	50	1	1,50,1	5774.096	4128.657	0.0215	5.379
4	50	1	4,50,1	5869.819	4300.171	0.0230	5.378
8	50	1	8,50,1	5741.143	4170.777	0.0219	5.504
16	50	1	16,50,1	5832.070	4235.896	0.0225	5.591
32	50	1	32,50,1	6030.012	4468.232	0.0248	5.786
1	1	10	1,1,10	6112.032	4520.958	0.0257	13.301
4	1	10	4,1,10	5775.796	4125.667	0.0210	13.422
8	1	10	8,1,10	5661.056	4047.893	0.0206	13.643
16	1	10	16,1,10	5751.102	4130.992	0.0217	14.472
32	1	10	32,1,10	6031.618	4416.048	0.0242	15.356
1	10	10	1,10,10	5806.067	4109.838	0.0212	13.757
4	10	10	4,10,10	5764.339	4122.760	0.0211	13.959
8	10	10	8,10,10	5686.531	4042.560	0.0205	14.392
16	10	10	16,10,10	5690.439	4050.731	0.0207	14.956
32	10	10	32,10,10	5615.942	4088.563	0.0222	16.079
1	50	10	1,50,10	6079.735	4174.435	0.0216	14.411
4	50	10	4,50,10	5751.876	4016.660	0.0208	15.333
8	50	10	8,50,10	5735.563	4043.623	0.0205	14.448
16	50	10	16,50,10	5764.435	4171.048	0.0219	14.931
32	50	10	32,50,10	5924.575	4438.517	0.0255	16.498
1	1	100	1,1,100	6073.468	4511.421	0.0256	93.922
4	1	100	4,1,100	5667.515	4012.328	0.0203	96.341
8	1	100	8,1,100	**5585.884**	**3950.845**	**0.0196**	**103.195**
16	1	100	16,1,100	5591.259	3960.110	0.0200	106.520
32	1	100	32,1,100	5869.387	4198.889	0.0221	116.640
1	10	100	1,10,100	5804.391	4168.364	0.0224	96.799
4	10	100	4,10,100	6022.752	4090.603	0.0204	99.622
8	10	100	8,10,100	6208.955	4289.021	0.0213	104.550
16	10	100	16,10,100	5744.344	4109.157	0.0210	112.981
32	10	100	32,10,100	5753.072	4090.430	0.0211	123.130
1	50	100	1,50,100	5980.236	4260.675	0.0228	97.283
4	50	100	4,50,100	6398.844	4377.032	0.0218	101.800
8	50	100	8,50,100	7001.159	4859.779	0.0243	104.162
16	50	100	16,50,100	6542.472	4737.485	0.0248	106.592
32	50	100	32,50,100	6057.119	4378.193	0.0236	119.411

ANEXO D

TABULACIÓN DE VALORES DE SIMULACIÓN PARA GRU

Tabla D.1. First group - GRU results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	6569.771	4855.293	0.02812	4.743
4	1	1	4,1,1	6615.609	4879.668	0.02839	4.755
8	1	1	8,1,1	6468.121	4774.461	0.02753	4.770
16	1	1	16,1,1	6381.878	4732.238	0.02775	4.928
32	1	1	32,1,1	6524.250	4895.939	0.03058	5.021
1	10	1	1,10,1	5969.190	4369.032	0.02413	4.730
4	10	1	4,10,1	5918.853	4303.231	0.02300	4.767
8	10	1	8,10,1	5941.580	4343.006	0.02351	4.819
16	10	1	16,10,1	5948.027	4334.812	0.02359	4.864
32	10	1	32,10,1	6052.370	4442.710	0.02455	4.915
1	50	1	1,50,1	5726.762	4159.749	0.02233	4.669
4	50	1	4,50,1	5835.018	4252.360	0.02256	4.714
8	50	1	8,50,1	5741.617	4171.770	0.02190	4.778
16	50	1	16,50,1	5900.426	4308.588	0.02321	4.876
32	50	1	32,50,1	6040.121	4468.919	0.02497	4.910
1	1	10	1,1,10	6007.400	4405.882	0.02433	7.174
4	1	10	4,1,10	5890.667	4264.852	0.02244	7.276
8	1	10	8,1,10	5836.200	4239.890	0.02254	7.353
16	1	10	16,1,10	5922.002	4306.030	0.02335	7.547
32	1	10	32,1,10	6086.061	4460.794	0.02489	7.746
1	10	10	1,10,10	5616.065	3983.146	0.02040	7.273
4	10	10	4,10,10	5715.431	4077.131	0.02059	7.351
8	10	10	8,10,10	5629.239	4018.160	0.02031	7.465
16	10	10	16,10,10	5760.788	4118.081	0.02136	7.624
32	10	10	32,10,10	6016.407	4400.741	0.02433	7.847
1	50	10	1,50,10	5693.598	4066.125	0.02132	7.272
4	50	10	4,50,10	6002.166	4280.342	0.02339	7.374
8	50	10	8,50,10	5831.738	4168.453	0.02109	7.474
16	50	10	16,50,10	5827.276	4187.464	0.02195	7.623
32	50	10	32,50,10	6052.259	4443.811	0.02485	7.930
1	1	100	1,1,100	6009.450	4449.406	0.02482	32.672
4	1	100	4,1,100	**5612.749**	**3953.799**	**0.01970**	**34.093**
8	1	100	8,1,100	5634.153	3970.874	0.01970	34.641
16	1	100	16,1,100	5637.084	3988.363	0.01994	35.598
32	1	100	32,1,100	5929.482	4224.268	0.02204	36.835
1	10	100	1,10,100	5761.358	4019.238	0.02043	34.079
4	10	100	4,10,100	5761.818	4085.790	0.02178	34.734
8	10	100	8,10,100	5923.270	4203.806	0.02125	35.865
16	10	100	16,10,100	5965.551	4189.438	0.02143	37.764
32	10	100	32,10,100	5896.241	4186.021	0.02129	37.481
1	50	100	1,50,100	6080.313	4421.152	0.02436	32.873
4	50	100	4,50,100	6326.006	4519.644	0.02345	34.110
8	50	100	8,50,100	6839.716	4897.951	0.02472	34.035
16	50	100	16,50,100	7199.972	5273.600	0.02659	35.464
32	50	100	32,50,100	6320.111	4615.995	0.02449	39.277

Tabla D.2. Second group - GRU results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	6360.410	4684.523	0.02635	5.091
4	1	1	4,1,1	6303.501	4608.186	0.02561	4.996
8	1	1	8,1,1	6189.367	4558.193	0.02556	4.901
16	1	1	16,1,1	6332.833	4689.390	0.02723	5.051
32	1	1	32,1,1	6304.758	4721.360	0.02835	5.490
1	10	1	1,10,1	5867.339	4267.535	0.02309	5.115
4	10	1	4,10,1	5852.714	4244.746	0.02237	4.862
8	10	1	8,10,1	5765.053	4184.822	0.02206	4.909
16	10	1	16,10,1	5908.953	4306.048	0.02328	4.946
32	10	1	32,10,1	6049.816	4467.086	0.02490	5.202
1	50	1	1,50,1	5866.334	4271.599	0.02304	4.915
4	50	1	4,50,1	5838.039	4267.848	0.02256	4.966
8	50	1	8,50,1	5765.330	4204.988	0.02215	5.232
16	50	1	16,50,1	5935.866	4368.570	0.02359	5.269
32	50	1	32,50,1	5999.229	4426.770	0.02420	5.329
1	1	10	1,1,10	6148.208	4535.183	0.02581	9.784
4	1	10	4,1,10	5866.668	4236.843	0.02217	10.357
8	1	10	8,1,10	5789.346	4193.518	0.02211	10.663
16	1	10	16,1,10	5858.335	4248.431	0.02282	11.038
32	1	10	32,1,10	6049.794	4432.880	0.02453	11.551
1	10	10	1,10,10	5818.687	4195.365	0.02242	10.326
4	10	10	4,10,10	5906.268	4146.437	0.02116	10.589
8	10	10	8,10,10	5640.153	4025.283	0.02046	10.571
16	10	10	16,10,10	5813.864	4186.414	0.02194	10.856
32	10	10	32,10,10	6184.696	4690.328	0.02857	11.720
1	50	10	1,50,10	5737.576	4175.129	0.02260	10.102
4	50	10	4,50,10	5929.785	4086.182	0.02103	10.253
8	50	10	8,50,10	5780.716	4124.516	0.02157	10.369
16	50	10	16,50,10	5904.450	4336.681	0.02326	10.687
32	50	10	32,50,10	6108.307	4608.849	0.02714	11.321
1	1	100	1,1,100	6073.434	4553.358	0.02636	59.597
4	1	100	4,1,100	5663.787	4003.391	0.02007	60.554
8	1	100	8,1,100	**5600.504**	**3972.234**	**0.01962**	**66.179**
16	1	100	16,1,100	5613.535	3977.132	0.01991	65.991
32	1	100	32,1,100	5932.439	4291.394	0.02325	71.698
1	10	100	1,10,100	6016.253	4346.663	0.02439	62.912
4	10	100	4,10,100	5987.468	4091.271	0.02039	64.926
8	10	100	8,10,100	6207.939	4278.759	0.02146	68.696
16	10	100	16,10,100	5860.762	4236.582	0.02151	72.864
32	10	100	32,10,100	5744.926	4090.100	0.02088	77.632
1	50	100	1,50,100	6210.329	4623.366	0.02722	61.279
4	50	100	4,50,100	6281.798	4326.437	0.02155	62.613
8	50	100	8,50,100	7114.088	5058.448	0.02531	65.951
16	50	100	16,50,100	6889.954	4996.702	0.02617	69.129
32	50	100	32,50,100	6352.796	4601.297	0.02446	73.971

Tabla D.3. Third group - GRU results

TimeStep (Lags)	Number Neurons	Epochs	Hyperparameters Setting	RMSE	MAE	MAPE	Lapsed Time [s]
1	1	1	1,1,1	6292.901	4625.978	0.02596	4.983
4	1	1	4,1,1	6361.407	4661.800	0.02604	4.962
8	1	1	8,1,1	6192.800	4557.082	0.02544	5.303
16	1	1	16,1,1	6202.509	4582.264	0.02627	5.346
32	1	1	32,1,1	6248.128	4663.599	0.02767	5.431
1	10	1	1,10,1	5900.884	4303.794	0.02343	5.142
4	10	1	4,10,1	5858.279	4256.796	0.02255	5.199
8	10	1	8,10,1	5753.003	4174.992	0.02198	5.316
16	10	1	16,10,1	5917.516	4322.414	0.02340	5.392
32	10	1	32,10,1	6120.331	4596.175	0.02654	5.605
1	50	1	1,50,1	6097.480	4467.955	0.02468	5.174
4	50	1	4,50,1	5885.619	4330.158	0.02334	5.252
8	50	1	8,50,1	5803.171	4244.146	0.02257	5.319
16	50	1	16,50,1	6044.986	4480.390	0.02471	5.238
32	50	1	32,50,1	6060.390	4545.008	0.02564	5.213
1	1	10	1,1,10	6164.286	4548.490	0.02592	11.887
4	1	10	4,1,10	5799.550	4158.502	0.02126	12.151
8	1	10	8,1,10	5692.001	4088.355	0.02100	12.682
16	1	10	16,1,10	5786.517	4170.085	0.02203	13.399
32	1	10	32,1,10	6030.681	4415.796	0.02435	14.205
1	10	10	1,10,10	5764.643	4136.643	0.02185	12.266
4	10	10	4,10,10	5843.914	4066.168	0.02090	12.443
8	10	10	8,10,10	5680.398	4008.220	0.02015	12.828
16	10	10	16,10,10	5789.711	4151.167	0.02144	13.526
32	10	10	32,10,10	6040.930	4522.583	0.02660	14.543
1	50	10	1,50,10	5739.662	4190.454	0.02291	12.495
4	50	10	4,50,10	5897.331	4074.475	0.02089	12.642
8	50	10	8,50,10	5789.226	4104.813	0.02134	12.979
16	50	10	16,50,10	5862.431	4296.989	0.02294	13.639
32	50	10	32,50,10	5891.884	4379.923	0.02481	14.654
1	1	100	1,1,100	6045.292	4510.236	0.02595	85.225
4	1	100	4,1,100	5648.052	3989.837	0.01997	88.006
8	1	100	8,1,100	**5600.595**	**3971.039**	**0.01962**	**89.822**
16	1	100	16,1,100	5616.484	3980.177	0.01994	95.403
32	1	100	32,1,100	5839.373	4195.324	0.02210	105.138
1	10	100	1,10,100	5927.587	4297.485	0.02408	94.793
4	10	100	4,10,100	6011.212	4098.466	0.02028	93.348
8	10	100	8,10,100	6294.265	4345.685	0.02167	99.651
16	10	100	16,10,100	5804.764	4182.763	0.02142	98.484
32	10	100	32,10,100	5747.472	4098.183	0.02100	108.213
1	50	100	1,50,100	6312.766	4671.989	0.02839	86.705
4	50	100	4,50,100	6268.669	4301.007	0.02143	90.225
8	50	100	8,50,100	7011.844	5015.805	0.02519	92.308
16	50	100	16,50,100	6797.988	4904.121	0.02541	98.080
32	50	100	32,50,100	6364.698	4669.818	0.02650	108.948

ANEXO E

TABULACIÓN DE VALORES DE SIMULACIÓN PARA OS-ELM

Tabla E.1. First group - OS-ELM results

Number Neurons	Forgetting Factor	RMSE	MAE	MAPE	Lapsed Time [s]
10	0.9	9518.178	6344.956	0.03877	0.142
10	0.95	10447.018	7477.483	0.04325	0.067
10	0.99	20116.983	16061.938	0.08413	0.069
10	0.995	22149.009	17693.711	0.09213	0.069
10	1	24030.764	19198.389	0.09998	0.070
110	0.9	24773.798	15367.068	0.06576	0.113
110	0.95	11183.264	7400.749	0.03484	0.100
110	0.99	3815.085	2782.685	0.01810	0.099
110	0.995	4038.103	2938.963	0.01918	0.089
110	1	4694.241	3364.208	0.02149	0.093
210	0.9	13126.480	7256.976	0.03271	0.146
210	0.95	8287.700	5181.770	0.02434	0.156
210	0.99	3255.397	2380.911	0.01279	0.138
210	0.995	3027.727	2225.221	0.01215	0.143
210	1	3275.512	2326.732	0.01256	0.140
310	0.9	6814.641	4687.769	0.02342	0.243
310	0.95	5829.936	4149.298	0.02077	0.249
310	0.99	3220.672	2412.050	0.01318	0.250
310	0.995	2946.759	2210.344	0.01231	0.264
310	1	3071.738	2242.558	0.01230	0.322
410	0.9	4563.982	3457.625	0.01882	1.070
410	0.95	4336.068	3273.084	0.01761	1.128
410	0.99	2986.602	2245.612	0.01250	1.071
410	0.995	2782.776	2093.925	0.01168	1.147
410	1	**2886.329**	**2122.076**	**0.01154**	**1.111**
510	0.9	4565.021	3447.846	0.01880	1.816
510	0.95	4366.424	3308.021	0.01766	1.668
510	0.99	3065.389	2336.221	0.01301	1.659
510	0.995	2825.950	2146.006	0.01211	1.734
510	1	2856.735	2138.646	0.01190	1.714
610	0.9	4193.854	3156.977	0.01741	2.338
610	0.95	4095.412	3062.757	0.01663	2.370
610	0.99	3149.027	2367.706	0.01324	2.388
610	0.995	2894.098	2151.517	0.01229	2.490
610	1	2876.412	2090.328	0.01195	2.486
710	0.9	3826.541	2909.227	0.01638	3.358
710	0.95	3738.864	2818.195	0.01564	3.259
710	0.99	2997.537	2283.044	0.01285	3.342
710	0.995	2775.530	2119.636	0.01208	3.366
710	1	2751.764	2045.987	0.01165	3.279
810	0.9	3715.441	2937.893	0.01663	4.433
810	0.95	3579.276	2818.415	0.01579	4.392
810	0.99	2957.600	2318.680	0.01306	4.526
810	0.995	2741.812	2143.297	0.01224	4.370
810	1	2683.983	2036.018	0.01169	4.374
910	0.9	3592.576	2844.872	0.01615	5.813
910	0.95	3489.045	2761.651	0.01547	5.696
910	0.99	2946.158	2308.912	0.01294	5.703
910	0.995	2740.974	2136.257	0.01213	5.759
910	1	2661.935	2028.125	0.01155	5.700

Tabla E.2. First group - OS-ELM results

Number Neurons	Forgetting Factor	RMSE	MAE	MAPE	Lapsed Time [s]
1010	0.9	3538.666	2778.493	0.01600	7.140
1010	0.95	3440.850	2701.221	0.01532	7.370
1010	0.99	2957.347	2315.113	0.01321	7.166
1010	0.995	2774.945	2161.927	0.01249	7.232
1010	1	2717.057	2082.360	0.01206	7.208
1110	0.9	3643.603	2829.937	0.01646	8.928
1110	0.95	3545.353	2742.221	0.01571	8.878
1110	0.99	3074.664	2355.257	0.01348	8.986
1110	0.995	2874.876	2201.640	0.01274	8.813
1110	1	2763.342	2088.075	0.01214	8.982
1210	0.9	3389.862	2663.211	0.01559	11.262
1210	0.95	3306.455	2585.616	0.01495	11.118
1210	0.99	2925.682	2265.692	0.01311	11.278
1210	0.995	2752.683	2145.790	0.01255	11.226
1210	1	2646.672	2049.718	0.01207	11.219
1310	0.9	3286.706	2561.644	0.01536	13.217
1310	0.95	3216.566	2507.593	0.01482	13.280
1310	0.99	2865.721	2247.599	0.01325	13.339
1310	0.995	2723.324	2143.885	0.01273	13.245
1310	1	2643.741	2048.163	0.01221	13.377
1410	0.9	3393.612	2625.812	0.01562	15.697
1410	0.95	3305.670	2558.466	0.01502	15.854
1410	0.99	2981.871	2309.858	0.01345	15.768
1410	0.995	2823.314	2194.610	0.01290	15.722
1410	1	2693.521	2090.383	0.01238	15.601
1510	0.9	3370.988	2645.770	0.01563	18.081
1510	0.95	3313.622	2580.004	0.01505	18.189
1510	0.99	3001.985	2336.505	0.01354	18.001
1510	0.995	2845.344	2229.373	0.01301	17.981
1510	1	2709.221	2129.918	0.01250	18.109
1610	0.9	3215.939	2534.384	0.01496	21.017
1610	0.95	3147.107	2474.343	0.01444	20.991
1610	0.99	2878.874	2251.807	0.01303	21.004
1610	0.995	2742.549	2146.220	0.01252	21.051
1610	1	2623.975	2047.366	0.01203	21.196
1710	0.9	3267.404	2573.922	0.01527	24.072
1710	0.95	3207.005	2528.353	0.01483	24.121
1710	0.99	2960.628	2329.307	0.01355	23.885
1710	0.995	2835.284	2228.045	0.01306	24.053
1710	1	2724.294	2134.799	0.01258	23.980
1810	0.9	3132.301	2504.491	0.01491	28.149
1810	0.95	3051.633	2435.082	0.01439	28.236
1810	0.99	2849.639	2268.773	0.01325	27.939
1810	0.995	2748.642	2181.278	0.01280	27.946
1810	1	2659.198	2093.724	0.01236	28.066
1910	0.9	3151.609	2489.225	0.01488	31.911
1910	0.95	3081.088	2428.907	0.01443	31.976
1910	0.99	2888.963	2269.098	0.01329	31.878
1910	0.995	2793.084	2189.906	0.01287	31.734
1910	1	2694.890	2107.548	0.01244	31.804

Tabla E.3. Second group - OS-ELM results

Number Neurons	Forgetting Factor	RMSE	MAE	MAPE	Lapsed Time [s]
10	0.9	20117.256	9109.940	0.05642	0.091
10	0.95	13058.925	9341.422	0.06228	0.069
10	0.99	29173.025	21481.911	0.11620	0.067
10	0.995	34078.132	24857.005	0.13027	0.071
10	1	38499.311	27737.583	0.14283	0.070
110	0.9	37684.421	21316.569	0.08850	0.092
110	0.95	11077.969	7290.247	0.03247	0.091
110	0.99	3646.505	2719.539	0.01546	0.091
110	0.995	3802.878	2805.557	0.01617	0.094
110	1	4482.937	3248.657	0.01838	0.092
210	0.9	13475.129	7508.044	0.03411	0.158
210	0.95	8670.672	5624.273	0.02641	0.143
210	0.99	3314.602	2380.069	0.01342	0.153
210	0.995	3109.600	2274.129	0.01308	0.142
210	1	3506.822	2529.973	0.01414	0.204
310	0.9	5715.490	3728.667	0.01968	0.253
310	0.95	5148.772	3512.700	0.01828	0.252
310	0.99	3004.841	2265.511	0.01289	0.277
310	0.995	2796.760	2171.049	0.01245	0.266
310	1	3011.770	2309.079	0.01291	0.268
410	0.9	4425.352	3213.695	0.01778	1.058
410	0.95	4221.912	3037.816	0.01642	1.182
410	0.99	3108.086	2285.874	0.01273	1.094
410	0.995	**2849.514**	**2140.723**	**0.01211**	**1.142**
410	1	2858.322	2176.607	0.01217	1.142
510	0.9	3982.600	2939.566	0.01685	1.674
510	0.95	3887.684	2842.497	0.01593	1.779
510	0.99	3157.159	2347.349	0.01332	1.737
510	0.995	2918.107	2230.114	0.01274	1.912
510	1	2885.479	2196.272	0.01250	1.734
610	0.9	3730.220	2859.060	0.01641	2.374
610	0.95	3635.407	2754.626	0.01557	2.422
610	0.99	3044.922	2291.230	0.01327	2.429
610	0.995	2834.409	2177.701	0.01274	2.396
610	1	2804.704	2170.089	0.01262	2.405
710	0.9	3524.341	2735.240	0.01600	3.435
710	0.95	3450.040	2652.238	0.01525	3.268
710	0.99	3021.454	2298.983	0.01331	3.329
710	0.995	2820.213	2150.124	0.01269	3.292
710	1	2747.953	2139.596	0.01259	3.298
810	0.9	3512.667	2735.985	0.01595	4.537
810	0.95	3441.602	2666.664	0.01535	4.375
810	0.99	3048.632	2340.783	0.01360	4.392
810	0.995	2853.813	2226.214	0.01307	4.498
810	1	2750.845	2186.928	0.01281	4.385
910	0.9	3369.028	2645.914	0.01584	5.618
910	0.95	3304.476	2582.256	0.01519	5.789
910	0.99	2986.013	2326.393	0.01371	5.690
910	0.995	2838.166	2224.149	0.01323	5.714
910	1	2771.505	2196.174	0.01302	5.751

Tabla E.4. Second group - OS-ELM results

Number Neurons	Forgetting Factor	RMSE	MAE	MAPE	Lapsed Time [s]
1010	0.9	3213.902	2485.934	0.01495	7.202
1010	0.95	3174.153	2446.635	0.01450	7.212
1010	0.99	2903.160	2247.321	0.01325	7.179
1010	0.995	2764.915	2159.697	0.01283	7.146
1010	1	2687.220	2134.519	0.01263	7.264
1110	0.9	3157.495	2486.606	0.01490	8.782
1110	0.95	3096.048	2441.669	0.01449	8.930
1110	0.99	2881.358	2285.601	0.01356	8.974
1110	0.995	2757.975	2195.704	0.01316	8.833
1110	1	2681.799	2166.867	0.01297	9.012
1210	0.9	3122.518	2468.755	0.01496	11.159
1210	0.95	3074.744	2431.464	0.01458	11.596
1210	0.99	2882.478	2281.962	0.01361	11.918
1210	0.995	2780.049	2202.703	0.01323	11.259
1210	1	2710.093	2177.818	0.01305	11.162
1310	0.9	3073.274	2413.782	0.01451	13.208
1310	0.95	3031.795	2382.368	0.01421	13.311
1310	0.99	2855.443	2241.310	0.01332	13.360
1310	0.995	2738.975	2148.520	0.01288	13.218
1310	1	2633.021	2080.787	0.01253	13.162
1410	0.9	3053.697	2441.372	0.01451	15.754
1410	0.95	3038.414	2422.547	0.01429	15.708
1410	0.99	2885.336	2287.570	0.01349	15.680
1410	0.995	2788.005	2214.275	0.01314	15.779
1410	1	2702.085	2161.732	0.01285	15.712
1510	0.9	2995.507	2302.195	0.01391	18.154
1510	0.95	2963.620	2288.220	0.01372	18.381
1510	0.99	2840.262	2187.672	0.01307	18.233
1510	0.995	2755.514	2128.816	0.01279	18.114
1510	1	2669.063	2092.205	0.01259	18.342
1610	0.9	2950.376	2328.141	0.01378	21.120
1610	0.95	2910.679	2300.299	0.01357	21.381
1610	0.99	2784.678	2191.986	0.01293	21.150
1610	0.995	2711.350	2130.812	0.01264	21.145
1610	1	2646.293	2078.112	0.01237	21.320
1710	0.9	2983.426	2348.267	0.01413	24.047
1710	0.95	2941.477	2319.911	0.01391	24.210
1710	0.99	2829.665	2230.983	0.01332	24.126
1710	0.995	2761.738	2179.401	0.01306	24.145
1710	1	2695.948	2131.668	0.01280	24.014
1810	0.9	2860.484	2302.973	0.01391	28.242
1810	0.95	2838.065	2286.009	0.01373	28.284
1810	0.99	2732.408	2188.892	0.01312	28.185
1810	0.995	2672.533	2141.838	0.01289	28.268
1810	1	2613.818	2106.573	0.01268	28.265
1910	0.9	2846.211	2261.756	0.01367	32.041
1910	0.95	2831.315	2244.945	0.01349	31.965
1910	0.99	2738.269	2165.189	0.01295	31.942
1910	0.995	2685.148	2123.049	0.01274	31.883
1910	1	2636.693	2097.742	0.01258	31.957

Tabla E.5. Third group - OS-ELM results

Number Neurons	Forgetting Factor	RMSE	MAE	MAPE	Lapsed Time [s]
10	0.9	16339.629	9384.567	0.05783	0.092
10	0.95	14484.560	9956.305	0.06466	0.069
10	0.99	21753.823	16303.731	0.10193	0.070
10	0.995	24178.829	17857.327	0.11171	0.070
10	1	26369.795	19430.043	0.12224	0.072
110	0.9	47798.870	24185.199	0.10071	0.097
110	0.95	14008.613	8674.388	0.03883	0.093
110	0.99	4100.081	3062.899	0.01784	0.092
110	0.995	4307.946	3241.140	0.01904	0.098
110	1	5035.674	3741.690	0.02159	0.095
210	0.9	19954.726	8494.369	0.03693	0.174
210	0.95	9738.465	5566.033	0.02570	0.179
210	0.99	3572.369	2707.083	0.01480	0.155
210	0.995	3474.253	2632.742	0.01466	0.158
210	1	3835.781	2807.140	0.01559	0.167
310	0.9	6352.361	4294.393	0.02174	0.275
310	0.95	5633.419	3859.218	0.01961	0.265
310	0.99	3533.834	2589.914	0.01426	0.274
310	0.995	3260.704	2416.496	0.01362	0.257
310	1	3386.356	2472.499	0.01387	0.296
410	0.9	4587.048	3431.223	0.01882	1.140
410	0.95	4384.103	3276.136	0.01778	1.113
410	0.99	3278.790	2553.202	0.01451	1.127
410	0.995	3068.922	2361.303	0.01374	1.133
410	1	3156.913	2377.180	0.01375	1.142
510	0.9	4058.494	3150.569	0.01766	1.861
510	0.95	3931.416	3046.943	0.01691	1.760
510	0.99	3159.923	2502.659	0.01423	1.712
510	0.995	2953.041	2368.254	0.01362	1.732
510	1	2944.116	2333.071	0.01340	1.752
610	0.9	3596.982	2863.029	0.01619	2.428
610	0.95	3521.108	2790.580	0.01566	2.479
610	0.99	3065.820	2446.975	0.01389	2.437
610	0.995	2836.113	2268.224	0.01313	2.564
610	1	2762.903	2201.870	0.01277	2.407
710	0.9	3368.045	2651.728	0.01519	3.389
710	0.95	3316.643	2591.473	0.01472	3.330
710	0.99	2972.525	2340.077	0.01335	3.360
710	0.995	2789.908	2220.665	0.01283	3.497
710	1	**2712.284**	**2139.846**	**0.01244**	**3.321**
810	0.9	3520.609	2731.606	0.01536	4.518
810	0.95	3475.003	2686.539	0.01500	4.489
810	0.99	3122.810	2409.146	0.01363	4.583
810	0.995	2929.472	2276.847	0.01307	4.543
810	1	2799.360	2183.526	0.01266	4.472
910	0.9	3339.669	2640.449	0.01516	5.911
910	0.95	3288.807	2580.457	0.01468	5.711
910	0.99	3009.332	2338.746	0.01339	5.784
910	0.995	2839.323	2219.157	0.01286	5.874
910	1	2702.602	2113.756	0.01239	5.814

Tabla E.6. Third group - OS-ELM results

Number Neurons	Forgetting Factor	RMSE	MAE	MAPE	Lapsed Time [s]
1010	0.9	3268.363	2638.530	0.01525	7.373
1010	0.95	3227.611	2599.060	0.01490	7.316
1010	0.99	2977.599	2392.777	0.01377	7.220
1010	0.995	2842.762	2292.936	0.01335	7.394
1010	1	2728.279	2197.906	0.01294	7.277
1110	0.9	3257.415	2566.175	0.01492	9.051
1110	0.95	3210.294	2521.505	0.01457	8.916
1110	0.99	2991.257	2332.108	0.01348	9.066
1110	0.995	2869.447	2238.199	0.01306	9.128
1110	1	2752.108	2155.685	0.01267	8.964
1210	0.9	3225.348	2492.428	0.01468	11.363
1210	0.95	3187.115	2465.834	0.01441	11.335
1210	0.99	3006.546	2325.932	0.01355	11.209
1210	0.995	2890.572	2242.303	0.01317	11.415
1210	1	2772.724	2164.397	0.01280	11.330
1310	0.9	3049.582	2401.745	0.01417	13.357
1310	0.95	3037.566	2392.662	0.01397	13.429
1310	0.99	2901.856	2270.661	0.01321	13.435
1310	0.995	2809.879	2207.526	0.01289	13.317
1310	1	2713.225	2141.247	0.01256	13.391
1410	0.9	3145.673	2494.660	0.01466	15.894
1410	0.95	3100.956	2455.043	0.01435	15.885
1410	0.99	2959.222	2334.995	0.01361	15.909
1410	0.995	2862.634	2271.171	0.01331	15.813
1410	1	2747.048	2195.263	0.01294	15.818
1510	0.9	2914.779	2304.487	0.01387	18.320
1510	0.95	2906.483	2293.301	0.01370	18.292
1510	0.99	2800.541	2199.187	0.01307	18.349
1510	0.995	2734.120	2151.809	0.01283	18.341
1510	1	2665.251	2106.224	0.01260	18.417
1610	0.9	3020.125	2430.698	0.01427	21.368
1610	0.95	2990.673	2390.516	0.01399	21.300
1610	0.99	2885.666	2293.988	0.01343	22.073
1610	0.995	2811.450	2237.254	0.01317	21.442
1610	1	2722.825	2174.215	0.01288	21.452
1710	0.9	2942.098	2343.208	0.01376	26.714
1710	0.95	2915.188	2307.354	0.01352	24.412
1710	0.99	2816.109	2215.167	0.01299	24.507
1710	0.995	2755.990	2170.564	0.01277	24.513
1710	1	2692.903	2118.451	0.01252	24.462
1810	0.9	2904.413	2297.851	0.01358	28.525
1810	0.95	2849.189	2241.468	0.01330	28.491
1810	0.99	2765.894	2173.994	0.01287	28.413
1810	0.995	2712.407	2143.923	0.01272	28.587
1810	1	2649.944	2103.028	0.01250	28.647
1910	0.9	2886.515	2269.565	0.01352	32.845
1910	0.95	2850.386	2240.994	0.01332	32.266
1910	0.99	2769.063	2168.933	0.01285	32.178
1910	0.995	2718.117	2133.532	0.01267	32.079
1910	1	2658.902	2091.701	0.01245	32.099